

## SEQUENCE LISTING

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Trp Asn Gln Met Asn Leu Gly Ala Thr

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&lt;210&gt; 246

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 246

Trp Pro Ser Cys Gln Lys Lys Phe Ala

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&lt;210&gt; 247

&lt;211&gt; 9

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&lt;400&gt; 247

Trp Thr Glu Gly Gln Ser Asn His Ser

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Tyr Phe Lys Leu Ser His Leu Gln Met

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Tyr Gly His Thr Pro Ser His His Ala

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Tyr Pro Gly Cys Asn Lys Arg Tyr Phe

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Tyr Gln Met Thr Ser Gln Leu Glu Cys

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Tyr Arg Ile His Thr His Gly Val Phe

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&lt;213&gt; Homo sapien

&lt;400&gt; 253

Tyr Ser Ser Asp Asn Leu Tyr Gln Met

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Ala Glu Pro His Glu Glu Gln Cys Leu

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&lt;213&gt; Mus musculus

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Ala Leu Leu Pro Ala Val Ser Ser Leu

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&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 256

Ala Tyr Gly Ser Leu Gly Gly Pro Ala

1

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&lt;210&gt; 257

&lt;211&gt; 9

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&lt;213&gt; Mus musculus

&lt;400&gt; 257

Ala Tyr Pro Gly Cys Asn Lys Arg Tyr

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&lt;210&gt; 258

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 258

Cys Met Thr Trp Asn Gln Met Asn Leu

1

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&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 259

Cys Thr Gly Ser Gln Ala Leu Leu Leu

1

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&lt;210&gt; 260

&lt;211&gt; 9

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&lt;213&gt; Mus musculus

&lt;400&gt; 260

Asp Gly Ala Pro Ser Tyr Gly His Thr

1

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&lt;213&gt; Mus musculus

&lt;400&gt; 261

Asp Leu Asn Ala Leu Leu Pro Ala Val

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&lt;213&gt; Mus musculus

&lt;400&gt; 262

Asp Pro Met Gly Gln Gln Gly Ser Leu

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Asp Ser Cys Thr Gly Ser Gln Ala Leu

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&lt;400&gt; 264

Asp Val Arg Asp Leu Asn Ala Leu Leu

1

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&lt;210&gt; 265

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 265

Glu Gln Cys Leu Ser Ala Phe Thr Leu

1

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&lt;211&gt; 9

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&lt;213&gt; Mus musculus

&lt;400&gt; 266

Glu Ser Asp Asn His Thr Ala Pro Ile

1

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&lt;210&gt; 267

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&lt;213&gt; Mus musculus

&lt;400&gt; 267

Phe Pro Asn Ala Pro Tyr Leu Pro Ser

1

5

&lt;210&gt; 268

&lt;211&gt; 9

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&lt;400&gt; 268

Gly Cys Asn Lys Arg Tyr Phe Lys Leu

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&lt;211&gt; 9

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&lt;400&gt; 269

Gly Gln Ala Arg Met Phe Pro Asn Ala

1

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Gly Val Phe Arg Gly Ile Gln Asp Val

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&lt;213&gt; Mus musculus

&lt;400&gt; 271

Gly Tyr Glu Ser Asp Asn His Thr Ala

1

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&lt;210&gt; 272

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 272

His Ser Phe Lys His Glu Asp Pro Met

1

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&lt;210&gt; 273

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&lt;400&gt; 273

His Thr His Gly Val Phe Arg Gly Ile

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Ile Leu Cys Gly Ala Gln Tyr Arg Ile

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Lys Phe Ala Arg Ser Asp Glu Leu Val

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Lys Arg Tyr Phe Lys Leu Ser His Leu

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Lys Thr Ser Glu Lys Pro Phe Ser Cys

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Leu Glu Cys Met Thr Trp Asn Gln Met

1

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Leu Gly Gly Gly Gly Gly Cys Gly Leu

1

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Leu Gln Met His Ser Arg Lys His Thr

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Met His Gln Arg Asn Met Thr Lys Leu

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&lt;400&gt; 282

Asn Ala Pro Tyr Leu Pro Ser Cys Leu

1

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Asn Leu Gly Ala Thr Leu Lys Gly Met

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Asn Leu Tyr Gln Met Thr Ser Gln Leu

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Asn Met Thr Lys Leu His Val Ala Leu

1

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Asn Gln Met Asn Leu Gly Ala Thr Leu



1

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&lt;210&gt; 287

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&lt;213&gt; Mus musculus

&lt;400&gt; 287

Pro Gly Ala Ser Ala Tyr Gly Ser Leu

1

5

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Gln Ala Ser Ser Gly Gln Ala Arg Met

1

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Gln Met Thr Ser Gln Leu Glu Cys Met

1

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&lt;400&gt; 290

Gln Gln Tyr Ser Val Pro Pro Pro Val

1

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Gln Tyr Arg Ile His Thr His Gly Val

1

5

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Gln Tyr Ser Val Pro Pro Pro Val Tyr

1

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&lt;210&gt; 293

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&lt;400&gt; 293

Arg Met Phe Pro Asn Ala Pro Tyr Leu

1

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&lt;210&gt; 294

&lt;211&gt; 9

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&lt;400&gt; 294

Arg Thr Pro Tyr Ser Ser Asp Asn Leu

1

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Arg Val Ser Gly Val Ala Pro Thr Leu

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&lt;400&gt; 296

Ser Cys Leu Glu Ser Gln Pro Thr Ile

1

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Ser Cys Gln Lys Lys Phe Ala Arg Ser

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&lt;213&gt; Mus musculus

&lt;400&gt; 298

Ser Asp Val Arg Asp Leu Asn Ala Leu

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&lt;213&gt; Mus musculus

&lt;400&gt; 299

Ser Leu Gly Glu Gln Gln Tyr Ser Val

1

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Thr Cys Gln Arg Lys Phe Ser Arg Ser

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Thr Glu Gly Gln Ser Asn His Gly Ile

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Thr Leu His Phe Ser Gly Gln Phe Thr

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&lt;213&gt; Mus musculus

&lt;400&gt; 303

Thr Leu Val Arg Ser Ala Ser Glu Thr

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&lt;210&gt; 304

&lt;211&gt; 9

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&lt;213&gt; Mus musculus

&lt;400&gt; 304

Val Leu Asp Phe Ala Pro Pro Gly Ala

1

5

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&lt;211&gt; 9

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&lt;213&gt; Mus musculus

&lt;400&gt; 305

Trp Asn Gln Met Asn Leu Gly Ala Thr

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Tyr Phe Lys Leu Ser His Leu Gln Met

1

5

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&lt;213&gt; Mus musculus

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Tyr Gln Met Thr Ser Gln Leu Glu Cys

1

5

&lt;210&gt; 308

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

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Tyr Ser Ser Asp Asn Leu Tyr Gln Met

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&lt;213&gt; Homo sapien

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Gly Ala Ala Gln Trp Ala

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 Arg Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg Tyr Phe Lys  
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&lt;212&gt; PRT

&lt;213&gt; Mus musculus

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ggtggcagcg gtctggttcc gcgtggtagc tctggttcgg gggacgacga cgacaaatct 480
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gacttcgcac cgccgggtgc atccgcatac ggttccctgg gtggtccggc accgcgcgcg 660
gcaccgccgc cgccggccgc gccggccgcg cactccttca tcaaacagga accgagctgg 720
ggtggtgcag aaccgcacga agaacagtgc ctgagcgcat tcaccgttca cttctccggc 780
cagttcactg gcacagccgg agcctgtgcg tacgggccct tcggtcctcc tccgcccagc 840
caggcgtcat ccggccaggc caggatgttt cctaaccgcg cctacctgcc cagctgcctc 900
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cagagaaaca tgaccaaact ccagctggcg ctttga 1776

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&lt;210&gt; 330

&lt;211&gt; 771

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 330

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tgggctccgg ttctggactt cgcaccgccg ggtgcatccg catacggttc cctgggtggt 180
ccggcaccgc cgccggcacc gccgcgcgcg ccgcgcgcgc agccgcactc cttcatcaaa 240
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gttcaacttc cgggcagtt cactggcaca gcgggagcct gtcgctacgg gcccttcggt 360
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ctgcccagct gcctcgagag ccagcccgtt attcgcaatc agggttacag cacggtcacc 480
ttcgacggga cggccagcta cggtcacacg cctcgcacc atgcccgcga gttccccaac 540
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gctttgctgc tgaggacgcc ctacagcagt gacaatttat accaaatgac atcccagctt 720
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&lt;210&gt; 331

<211> 567  
 <212> DNA  
 <213> Homo sapiens

<400> 331  
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 gatgtgcgac gtgtgcctgg agtagccccg actcttgtag ggtcggcatc tgagaccagt 180  
 gagaaacgcc ccttcattgtg tgccttaccca ggctgcaata agagatatit taagctgtcc 240  
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 ggtgtgaaac cattccagtg taaaacttgt cagcgaaagt tctcccggtc cgaccacctg 420  
 aagaccaca ccaggactca tacaggtgaa aagcccttca gctgtcgggt gccaaagttgt 480  
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 atgaccaaac tccagctggc gctttga 567

<210> 332  
 <211> 342  
 <212> PRT  
 <213> Homo sapiens

<400> 332  
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 Thr Asp Asp Ser Phe Asp Thr Asp Val Leu Lys Ala Asp Gly Ala Ile  
 20 25 30  
 Leu Val Asp Phe Trp Ala Glu Trp Cys Gly Pro Cys Lys Met Ile Ala  
 35 40 45  
 Pro Ile Leu Asp Glu Ile Ala Asp Glu Tyr Gln Gly Lys Leu Thr Val  
 50 55 60  
 Ala Lys Leu Asn Ile Asp Gln Asn Pro Gly Thr Ala Pro Lys Tyr Gly  
 65 70 75 80  
 Ile Arg Gly Ile Pro Thr Leu Leu Leu Phe Lys Asn Gly Glu Val Ala  
 85 90 95  
 Ala Thr Lys Val Gly Ala Leu Ser Lys Gly Gln Leu Lys Glu Phe Leu  
 100 105 110  
 Asp Ala Asn Leu Ala Gly Ser Gly Ser Gly His Met Gln His His His  
 115 120 125  
 His His His Val Ser Ile Glu Gly Arg Ala Ser Ser Gly Gly Ser Gly  
 130 135 140  
 Leu Val Pro Arg Gly Ser Ser Gly Ser Gly Asp Asp Asp Lys Ser  
 145 150 155 160  
 Ser Arg His Ser Thr Gly Tyr Glu Ser Asp Asn His Thr Thr Pro Ile  
 165 170 175  
 Leu Cys Gly Ala Gln Tyr Arg Ile His Thr His Gly Val Phe Arg Gly  
 180 185 190  
 Ile Gln Asp Val Arg Arg Val Pro Gly Val Ala Pro Thr Leu Val Arg  
 195 200 205  
 Ser Ala Ser Glu Thr Ser Glu Lys Arg Pro Phe Met Cys Ala Tyr Pro  
 210 215 220  
 Gly Cys Asn Lys Arg Tyr Phe Lys Leu Ser His Leu Gln Met His Ser

225                      230                      235                      240  
 Arg Lys His Thr Gly Glu Lys Pro Tyr Gln Cys Asp Phe Lys Asp Cys  
                                  245                      250                      255  
 Glu Arg Arg Phe Phe Arg Ser Asp Gln Leu Lys Arg His Gln Arg Arg  
                                  260                      265                      270  
 His Thr Gly Val Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe  
                                  275                      280                      285  
 Ser Arg Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr Gly Glu  
                                  290                      295                      300  
 Lys Pro Phe Ser Cys Arg Trp Pro Ser Cys Gln Lys Lys Phe Ala Arg  
 305                      310                      315                      320  
 Ser Asp Glu Leu Val Arg His His Asn Met His Gln Arg Asn Met Thr  
                                  325                      330                      335  
 Lys Leu Gln Leu Ala Leu  
                                  340

<210> 333  
 <211> 410  
 <212> PRT  
 <213> Homo sapiens

<400> 333  
 Met Gln His His His His His His Met Ser Asp Lys Ile Ile His Leu  
                                  5                      10                      15  
 Thr Asp Asp Ser Phe Asp Thr Asp Val Leu Lys Ala Asp Gly Ala Ile  
                                  20                      25                      30  
 Leu Val Asp Phe Trp Ala Glu Trp Cys Gly Pro Cys Lys Met Ile Ala  
                                  35                      40                      45  
 Pro Ile Leu Asp Glu Ile Ala Asp Glu Tyr Gln Gly Lys Leu Thr Val  
                                  50                      55                      60  
 Ala Lys Leu Asn Ile Asp Gln Asn Pro Gly Thr Ala Pro Lys Tyr Gly  
                                  65                      70                      75                      80  
 Ile Arg Gly Ile Pro Thr Leu Leu Leu Phe Lys Asn Gly Glu Val Ala  
                                  85                      90                      95  
 Ala Thr Lys Val Gly Ala Leu Ser Lys Gly Gln Leu Lys Glu Phe Leu  
                                  100                      105                      110  
 Asp Ala Asn Leu Ala Gly Ser Gly Ser Gly His Met Gln His His His  
                                  115                      120                      125  
 His His His Val Ser Ile Glu Gly Arg Ala Ser Ser Gly Gly Ser Gly  
                                  130                      135                      140  
 Leu Val Pro Arg Gly Ser Ser Gly Ser Gly Asp Asp Asp Lys Ser  
 145                      150                      155                      160  
 Ser Arg Gly Ser Asp Val Arg Asp Leu Asn Ala Leu Leu Pro Ala Val  
                                  165                      170                      175  
 Pro Ser Leu Gly Gly Gly Gly Cys Ala Leu Pro Val Ser Gly Ala  
                                  180                      185                      190  
 Ala Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala  
                                  195                      200                      205  
 Tyr Gly Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro  
                                  210                      215                      220  
 Pro Pro Pro Pro Pro His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly  
 225                      230                      235                      240

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<210> 334
<211> 591
<212> PRT
<213> Homo sapiens
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Met	Gln	His	His	His	His	His	His	Met	Ser	Asp	Lys	Ile	Ile	His	Leu
				5					10					15	
Thr	Asp	Asp	Ser	Phe	Asp	Thr	Asp	Val	Leu	Lys	Ala	Asp	Gly	Ala	Ile
			20					25					30		
Leu	Val	Asp	Phe	Trp	Ala	Glu	Trp	Cys	Gly	Pro	Cys	Lys	Met	Ile	Ala
		35					40					45			
Pro	Ile	Leu	Asp	Glu	Ile	Ala	Asp	Glu	Tyr	Gln	Gly	Lys	Leu	Thr	Val
	50					55					60				
Ala	Lys	Leu	Asn	Ile	Asp	Gln	Asn	Pro	Gly	Thr	Ala	Pro	Lys	Tyr	Gly
	65				70					75					80
Ile	Arg	Gly	Ile	Pro	Thr	Leu	Leu	Leu	Phe	Lys	Asn	Gly	Glu	Val	Ala
				85					90					95	
Ala	Thr	Lys	Val	Gly	Ala	Leu	Ser	Lys	Gly	Gln	Leu	Lys	Glu	Phe	Leu
			100					105					110		
Asp	Ala	Asn	Leu	Ala	Gly	Ser	Gly	Ser	Gly	His	Met	Gln	His	His	His
		115					120					125			
His	His	His	Val	Ser	Ile	Glu	Gly	Arg	Ala	Ser	Ser	Gly	Gly	Ser	Gly
	130					135					140				
Leu	Val	Pro	Arg	Gly	Ser	Ser	Gly	Ser	Gly	Asp	Asp	Asp	Asp	Lys	Ser
145					150					155					160
Ser	Arg	Met	Gly	Ser	Asp	Val	Arg	Asp	Leu	Asn	Ala	Leu	Leu	Pro	Ala
				165					170					175	
Val	Pro	Ser	Leu	Gly	Gly	Gly	Gly	Gly	Cys	Ala	Leu	Pro	Val	Ser	Gly
			180					185					190		

Ala Ala Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser  
 195 200 205  
 Ala Tyr Gly Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Pro  
 210 215 220  
 Pro Pro Pro Pro Pro Pro His Ser Phe Ile Lys Gln Glu Pro Ser Trp  
 225 230 235 240  
 Gly Gly Ala Glu Pro His Glu Glu Gln Cys Leu Ser Ala Phe Thr Val  
 245 250 255  
 His Phe Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly  
 260 265 270  
 Pro Phe Gly Pro Pro Pro Pro Ser Gln Ala Ser Ser Gly Gln Ala Arg  
 275 280 285  
 Met Phe Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu Ser Gln Pro  
 290 295 300  
 Ala Ile Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp Gly Thr Pro  
 305 310 315 320  
 Ser Tyr Gly His Thr Pro Ser His His Ala Ala Gln Phe Pro Asn His  
 325 330 335  
 Ser Phe Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser Leu Gly Glu  
 340 345 350  
 Gln Gln Tyr Ser Val Pro Pro Pro Val Tyr Gly Cys His Thr Pro Thr  
 355 360 365  
 Asp Ser Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Thr Pro Tyr Ser  
 370 375 380  
 Ser Asp Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met Thr Trp  
 385 390 395 400  
 Asn Gln Met Asn Leu Gly Ala Thr Leu Lys Gly His Ser Thr Gly Tyr  
 405 410 415  
 Glu Ser Asp Asn His Thr Thr Pro Ile Leu Cys Gly Ala Gln Tyr Arg  
 420 425 430  
 Ile His Thr His Gly Val Phe Arg Gly Ile Gln Asp Val Arg Arg Val  
 435 440 445  
 Pro Gly Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr Ser Glu  
 450 455 460  
 Lys Arg Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg Tyr Phe  
 465 470 475 480  
 Lys Leu Ser His Leu Gln Met His Ser Arg Lys His Thr Gly Glu Lys  
 485 490 495  
 Pro Tyr Gln Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Phe Arg Ser  
 500 505 510  
 Asp Gln Leu Lys Arg His Gln Arg Arg His Thr Gly Val Lys Pro Phe  
 515 520 525  
 Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys  
 530 535 540  
 Thr His Thr Arg Thr His Thr Gly Glu Lys Pro Phe Ser Cys Arg Trp  
 545 550 555 560  
 Pro Ser Cys Gln Lys Lys Phe Ala Arg Ser Asp Glu Leu Val Arg His  
 565 570 575  
 His Asn Met His Gln Arg Asn Met Thr Lys Leu Gln Leu Ala Leu  
 580 585 590

<211> 256  
 <212> PRT  
 <213> Homo sapiens

<400> 335

Met	Gln	His	His	His	His	His	His	Gly	Ser	Asp	Val	Arg	Asp	Leu	Asn
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Ala	Leu	Leu	Pro	Ala	Val	Pro	Ser	Leu	Gly	Gly	Gly	Gly	Gly	Cys	Ala
			20					25					30		
Leu	Pro	Val	Ser	Gly	Ala	Ala	Gln	Trp	Ala	Pro	Val	Leu	Asp	Phe	Ala
		35					40					45			
Pro	Pro	Gly	Ala	Ser	Ala	Tyr	Gly	Ser	Leu	Gly	Gly	Pro	Ala	Pro	Pro
		50				55					60				
Pro	Ala	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	His	Ser	Phe	Ile	Lys
	65				70					75					80
Gln	Glu	Pro	Ser	Trp	Gly	Gly	Ala	Glu	Pro	His	Glu	Glu	Gln	Cys	Leu
				85				90					95		
Ser	Ala	Phe	Thr	Val	His	Phe	Ser	Gly	Gln	Phe	Thr	Gly	Thr	Ala	Gly
			100					105					110		
Ala	Cys	Arg	Tyr	Gly	Pro	Phe	Gly	Pro	Pro	Pro	Pro	Ser	Gln	Ala	Ser
		115					120					125			
Ser	Gly	Gln	Ala	Arg	Met	Phe	Pro	Asn	Ala	Pro	Tyr	Leu	Pro	Ser	Cys
	130					135					140				
Leu	Glu	Ser	Gln	Pro	Ala	Ile	Arg	Asn	Gln	Gly	Tyr	Ser	Thr	Val	Thr
	145				150					155					160
Phe	Asp	Gly	Thr	Pro	Ser	Tyr	Gly	His	Thr	Pro	Ser	His	His	Ala	Ala
				165					170					175	
Gln	Phe	Pro	Asn	His	Ser	Phe	Lys	His	Glu	Asp	Pro	Met	Gly	Gln	Gln
			180					185					190		
Gly	Ser	Leu	Gly	Glu	Gln	Gln	Tyr	Ser	Val	Pro	Pro	Pro	Val	Tyr	Gly
		195					200					205			
Cys	His	Thr	Pro	Thr	Asp	Ser	Cys	Thr	Gly	Ser	Gln	Ala	Leu	Leu	Leu
	210					215					220				
Arg	Thr	Pro	Tyr	Ser	Ser	Asp	Asn	Leu	Tyr	Gln	Met	Thr	Ser	Gln	Leu
	225				230					235					240
Glu	Cys	Met	Thr	Trp	Asn	Gln	Met	Asn	Leu	Gly	Ala	Thr	Leu	Lys	Gly
				245					250					255	

<210> 336  
 <211> 188  
 <212> PRT  
 <213> Homo sapiens

<400> 336

Met	Gln	His	His	His	His	His	His	His	Ser	Thr	Gly	Tyr	Glu	Ser	Asp
				5					10					15	
Asn	His	Thr	Thr	Pro	Ile	Leu	Cys	Gly	Ala	Gln	Tyr	Arg	Ile	His	Thr
			20					25					30		
His	Gly	Val	Phe	Arg	Gly	Ile	Gln	Asp	Val	Arg	Arg	Val	Pro	Gly	Val
		35				40						45			
Ala	Pro	Thr	Leu	Val	Arg	Ser	Ala	Ser	Glu	Thr	Ser	Glu	Lys	Arg	Pro
	50					55					60				
Phe	Met	Cys	Ala	Tyr	Pro	Gly	Cys	Asn	Lys	Arg	Tyr	Phe	Lys	Leu	Ser



65		70		75		80									
His	Leu	Gln	Met	His	Ser	Arg	Lys	His	Thr	Gly	Glu	Lys	Pro	Tyr	Gln
				85					90					95	
Cys	Asp	Phe	Lys	Asp	Cys	Glu	Arg	Arg	Phe	Phe	Arg	Ser	Asp	Gln	Leu
			100					105					110		
Lys	Arg	His	Gln	Arg	Arg	His	Thr	Gly	Val	Lys	Pro	Phe	Gln	Cys	Lys
		115					120					125			
Thr	Cys	Gln	Arg	Lys	Phe	Ser	Arg	Ser	Asp	His	Leu	Lys	Thr	His	Thr
	130					135					140				
Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Phe	Ser	Cys	Arg	Trp	Pro	Ser	Cys
145					150					155					160
Gln	Lys	Lys	Phe	Ala	Arg	Ser	Asp	Glu	Leu	Val	Arg	His	His	Asn	Met
			165						170					175	
His	Gln	Arg	Asn	Met	Thr	Lys	Leu	Gln	Leu	Ala	Leu				
			180					185							

<210> 337  
 <211> 324  
 <212> DNA  
 <213> Homo sapiens

<400> 337  
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 tgggctccag ttctggactt cgcaccgcct ggtgcatccg catacggttc cctgggtggg 180  
 ccagcacctc cgcgcgcaac gccccaccg cctccaccgc ccccgcactc cttcatcaaa 240  
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 gaattctgca gatattccatc acac 324

<210> 338  
 <211> 462  
 <212> DNA  
 <213> Homo sapiens

<400> 338  
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 ttctccggcc agttcactgg cacagccgga gcctgtcgtc acgggccctt cggtcctcct 120  
 ccgcccagcc aggcgtcatc cggccaggcc aggatgtttc ctaacgcgcc ctacctgcc 180  
 agtgcctcg agagccagcc cgctattcgc aatcagggtt acagcacggt caccttcgac 240  
 gggacgcca gctacgggtc cagccctcg caccatgcgg cgcagttccc caaccactca 300  
 ttcaagcatg aggatcccat gggccagcag ggctcgtctg gtgagcagca gtactcgggtg 360  
 ccgccccggg tctatggctg ccacaccccc accgacagct gcaccggcag ccaggccttg 420  
 ctgctgagga cgcctacag cagtgacaat ttatactgat ga 462

<210> 339  
 <211> 405  
 <212> DNA  
 <213> Homo sapiens

<400> 339  
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 aatttatacc aaatgacatc ccagcttgaa tgcattgacct ggaatcagat gaacttagga 120  
 gccaccttaa agggccacag cacagggtac gagagcgata accacacaac gcccatcctc 180  
 tgcggagccc aatacagaat acacacgcac ggtgtcttca gaggcattca ggatgtgca 240

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cgtgtgcctg gagtagcccc gactcttgta cggtcggcat ctgagaccag tgagaaacgc 300
cccttcatgt gtgcttacct aggtcgcaat aagagatatt ttaagctgtc ccacttacag 360
atgcacagca ggaagcacac tggtagaaaa ccataccagt gatga 405

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<210> 340
<211> 339
<212> DNA
<213> Homo sapiens

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<400> 340
atgcagcatc accaccatca ccaccacagc aggaagcaca ctggtgagaa accataccag 60
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aggagacata caggtgtgaa accattccag tgtaaaactt gtcagcgaaa gttctcccgg 180
tccgaccacc tgaagacca caccaggact catacagggtg aaaagccctt cagctgtcgg 240
tggccaagtt gtcagaaaaa gtttgcccgg tcagatgaat tagtccgcca tcacaacatg 300
catcagagaa acatgaccaa actccagctg gcgctttga 339

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<210> 341
<211> 1110
<212> DNA
<213> Homo sapiens

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<400> 341
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actggcacag cgggagcctg tcgtacggg cccttcgggc ctctccgcc cagccaggcg 180
tcattccggcc aggcaggtat gtttcctaac gcgccctacc tgcccagctg cctcgagagc 240
cagcccgcta ttcgcaatca gggttacagc acgggtcacct tcgacgggac gccagctac 300
ggtcacacgc cctcgcacca tgcggcgagc tcccccaacc actcattcaa gcatgaggat 360
cccatgggcc agcagggctc gctgggtgag cagcagtact cgggtccgcc cccgggtctat 420
ggctgccaca cccccaccga cagctgcacc ggcagccagg ctttgctgct gaggacgccc 480
tacagcagtg acaattttata ccaaatagaca tcccagcttg aatgcatgac ctggaatcag 540
atgaacttag gagccacctt aaagggccac agcacagggt acgagagcga taaccacaca 600
acgccatcc tctgcggagc ccaatacaga atacacacgc acggtgtctt cagaggcatt 660
caggatgtgc gacgtgtgcc tggagtagcc cogactcttg tacggtcggc atctgagacc 720
agtgagaaac gccccttcat gtgtgcttac ccaggctgca ataagagata ttttaagctg 780
tcccacttac agatgcacag caggaagcac actggtgaga aaccatacca gtgtgacttc 840
aaggactgtg aacgaaggtt ttttcgttca gaccagctca aaagacacca aaggagacat 900
acaggtgtga aaccattcca gtgtaaaact tgtcagcgaa agttctcccg gtccgaccac 960
ctgaagaccc acaccaggac tcatacagggt gaaaagccct tcagctgtcg gtggccaagt 1020
tgtcagaaaa agtttgcccg gtcagatgaa ttagtccgcc atcacaacat gcatcagaga 1080
aacatgacca aactccagct ggcgctttga 1110

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<210> 342
<211> 99
<212> PRT
<213> Homo sapiens

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<400> 342
Met Gln His His His His His Gly Ser Asp Val Arg Asp Leu Asn
          5              10              15

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Ala Leu Leu Pro Ala Val Pro Ser Leu Gly Gly Gly Gly Gly Cys Ala  
                   20                  25                  30  
 Leu Pro Val Ser Gly Ala Ala Gln Trp Ala Pro Val Leu Asp Phe Ala  
                   35                  40                  45  
 Pro Pro Gly Ala Ser Ala Tyr Gly Ser Leu Gly Gly Pro Ala Pro Pro  
                   50                  55                  60  
 Pro Ala Pro Pro Pro Pro Pro Pro Pro Pro Pro His Ser Phe Ile Lys  
                   65                  70                  75                  80  
 Gln Glu Pro Ser Trp Gly Gly Ala Glu Pro His Glu Glu Gln Cys Leu  
                   85                  90                  95  
 Ser Ala Phe

<210> 343  
 <211> 152  
 <212> PRT  
 <213> Homo sapiens

<400> 343  
 Met Gln His His His His His His His Glu Glu Gln Cys Leu Ser Ala  
                                   5                                  10                                  15  
 Phe Thr Val His Phe Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys  
                                   20                                  25                                  30  
 Arg Tyr Gly Pro Phe Gly Pro Pro Pro Pro Ser Gln Ala Ser Ser Gly  
                                   35                                  40                                  45  
 Gln Ala Arg Met Phe Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu  
                                   50                                  55                                  60  
 Ser Gln Pro Ala Ile Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp  
                                   65                                  70                                  75                                  80  
 Gly Thr Pro Ser Tyr Gly His Thr Pro Ser His His Ala Ala Gln Phe  
                                   85                                  90                                  95  
 Pro Asn His Ser Phe Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser  
                                   100                                  105                                  110  
 Leu Gly Glu Gln Gln Tyr Ser Val Pro Pro Pro Val Tyr Gly Cys His  
                                   115                                  120                                  125  
 Thr Pro Thr Asp Ser Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Thr  
                                   130                                  135                                  140  
 Pro Tyr Ser Ser Asp Asn Leu Tyr  
                                   145                                  150

<210> 344  
 <211> 133  
 <212> PRT  
 <213> Homo sapiens

<400> 344  
 Met Gln His His His His His His Gln Ala Leu Leu Leu Arg Thr Pro  
                                   5                                  10                                  15  
 Tyr Ser Ser Asp Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met  
                                   20                                  25                                  30  
 Thr Trp Asn Gln Met Asn Leu Gly Ala Thr Leu Lys Gly His Ser Thr  
                                   35                                  40                                  45  
 Gly Tyr Glu Ser Asp Asn His Thr Thr Pro Ile Leu Cys Gly Ala Gln

```

      50              55              60
Tyr Arg Ile His Thr His Gly Val Phe Arg Gly Ile Gln Asp Val Arg
 65              70              75              80
Arg Val Pro Gly Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr
      85              90              95
Ser Glu Lys Arg Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg
      100              105              110
Tyr Phe Lys Leu Ser His Leu Gln Met His Ser Arg Lys His Thr Gly
      115              120              125
Glu Lys Pro Tyr Gln
      130

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<210> 345
<211> 112
<212> PRT
<213> Homo sapiens

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<400> 345
Met Gln His His His His His His His Ser Arg Lys His Thr Gly Glu
      5              10              15
Lys Pro Tyr Gln Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Phe Arg
      20              25              30
Ser Asp Gln Leu Lys Arg His Gln Arg Arg His Thr Gly Val Lys Pro
      35              40              45
Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
      50              55              60
Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro Phe Ser Cys Arg
      65              70              75              80
Trp Pro Ser Cys Gln Lys Lys Phe Ala Arg Ser Asp Glu Leu Val Arg
      85              90              95
His His Asn Met His Gln Arg Asn Met Thr Lys Leu Gln Leu Ala Leu
      100              105              110

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<210> 346
<211> 369
<212> PRT
<213> Homo sapiens

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<400> 346
Met Gln His His His His His His His Ser Phe Ile Lys Gln Glu Pro
      5              10              15
Ser Trp Gly Gly Ala Glu Pro His Glu Glu Gln Cys Leu Ser Ala Phe
      20              25              30
Thr Val His Phe Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys Arg
      35              40              45
Tyr Gly Pro Phe Gly Pro Pro Pro Pro Ser Gln Ala Ser Ser Gly Gln
      50              55              60
Ala Arg Met Phe Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu Ser
      65              70              75              80
Gln Pro Ala Ile Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp Gly
      85              90              95
Thr Pro Ser Tyr Gly His Thr Pro Ser His His Ala Ala Gln Phe Pro

```

```

      100      105      110
Asn His Ser Phe Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser Leu
      115      120      125
Gly Glu Gln Gln Tyr Ser Val Pro Pro Pro Val Tyr Gly Cys His Thr
      130      135      140
Pro Thr Asp Ser Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Thr Pro
145      150      155      160
Tyr Ser Ser Asp Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met
      165      170      175
Thr Trp Asn Gln Met Asn Leu Gly Ala Thr Leu Lys Gly His Ser Thr
      180      185      190
Gly Tyr Glu Ser Asp Asn His Thr Thr Pro Ile Leu Cys Gly Ala Gln
      195      200      205
Tyr Arg Ile His Thr His Gly Val Phe Arg Gly Ile Gln Asp Val Arg
210      215      220
Arg Val Pro Gly Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr
225      230      235      240
Ser Glu Lys Arg Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg
      245      250      255
Tyr Phe Lys Leu Ser His Leu Gln Met His Ser Arg Lys His Thr Gly
      260      265      270
Glu Lys Pro Tyr Gln Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Phe
      275      280      285
Arg Ser Asp Gln Leu Lys Arg His Gln Arg Arg His Thr Gly Val Lys
      290      295      300
Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His
305      310      315      320
Leu Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro Phe Ser Cys
      325      330      335
Arg Trp Pro Ser Cys Gln Lys Lys Phe Ala Arg Ser Asp Glu Leu Val
      340      345      350
Arg His His Asn Met His Gln Arg Asn Met Thr Lys Leu Gln Leu Ala
      355      360      365
Leu

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<210> 347
<211> 21
<212> DNA
<213> Artificial Sequence

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<220>
<223> Primer

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<400> 347
ggctccgacg tgcgggacct g

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21

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<210> 348
<211> 30
<212> DNA
<213> Artificial Sequence

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<220>
<223> Primer

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<400> 348  
 gaattctcaa agcgccagct ggagtttggt 30  
  
 <210> 349  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Primer  
  
 <400> 349  
 ggctccgacg tgcgggacct g 21  
  
 <210> 350  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Primer  
  
 <400> 350  
 gaattctcaa agcgccagct ggagtttggt 30  
  
 <210> 351  
 <211> 21  
 <212> DNA  
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 <220>  
 <223> Primer  
  
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 cacagcacag ggtacgagag c 21  
  
 <210> 352  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Primer  
  
 <400> 352  
 gaattctcaa agcgccagct ggagtttggt 30  
  
 <210> 353  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>

<223> Primer

<400> 353  
cacgaagaac agtgcctgag cgcattcac 29

<210> 354

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 354  
ccggcgaatt catcagtata aattgtcact gc 32

<210> 355

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 355  
caggctttgc tgctgaggac gccc 24

<210> 356

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 356  
cacggagaat tcatcactgg tatggtttct cacc 34

<210> 357

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 357  
cacagcagga agcacactgg tgagaaac 28

<210> 358

<211> 30

<212> DNA

<213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 358

ggatatctgc agaattctca aagcgccagc

30

&lt;210&gt; 359

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 359

cactccttca tcaaacagga ac

22

&lt;210&gt; 360

&lt;211&gt; 30

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 360

ggatatctgc agaattctca aagcgccagc

30

&lt;210&gt; 361

&lt;211&gt; 33

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 361

ggttccgacg tgcgggacct gaacgcactg ctg

33

&lt;210&gt; 362

&lt;211&gt; 40

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 362

ctgccggcag cagtgcgttc aggtcccgca cgtoggaacc

40

&lt;210&gt; 363

&lt;211&gt; 35

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence



&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 363

ccggcagttc catccctggg tggcggtgga ggctg

35

&lt;210&gt; 364

&lt;211&gt; 38

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 364

cggcagtgcg cagcctccac cgccaccag ggatggaa

38

&lt;210&gt; 365

&lt;211&gt; 35

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 365

cgcactgccg gttagcggg cagcacagtg ggctc

35

&lt;210&gt; 366

&lt;211&gt; 33

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 366

cagaactgga gccactgtg ctgcaccgt aac

33

&lt;210&gt; 367

&lt;211&gt; 38

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 367

cagttctgga cttcgcaccg cctgggtgcat ccgcatac

38

&lt;210&gt; 368

&lt;211&gt; 39

&lt;212&gt; DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 368

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39

<210> 369

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 369

ggttccctgg gtggtccagc acctccgccc gcaacgcc

38

<210> 370

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 370

ggcgggtgggg gcgttgctgg cgaggtgct ggaccacc

38

<210> 371

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 371

cccaccgcct ccaccgccc cgactcctt catcaaacag

40

<210> 372

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 372

ctaggttcct gtttgatgaa ggagtgcggg ggcggtgga

39

<210> 373

<211> 38

<212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Primer

<400> 373  
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<210> 374  
 <211> 39  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Primer

<400> 374  
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<210> 375  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Primer

<400> 375  
 gtgcctgagc gcattctgag aattctgcag at 32

<210> 376  
 <211> 34  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Primer

<400> 376  
 gtgtgatgga tatctgcaga attctcagaa tgcg 34